

Abstract

Intensive microwave radiation in particular of great band width and energy over a relatively long period of time in the form of long pulse packets with a high pulse repetition frequency and a very high frequency spectrum can be achieved if microwave irradiation is effected during the discharge of a capacitive high-voltage generator (35) by way of the antenna (26) into a series of successive capacitors (13) to be connected in parallel. They are preferably constructed in the form of a concentric stack, connected to the antenna (26), of which the outer electrodes (16) which are at a reference potential are in the form of a continuous tube within which annular electrodes (15) are disposed on a carrier (20) in axially spaced relationship with each other in such a way that at the same time they act as the electrodes of arc switches (39) for successively switching on subsequent capacitors (13). The switch response characteristics and the charging time constants of the capacitor (13) which is respectively switched on therewith and the number thereof determine the length of the packet of high-frequency individual pulses (40) and thus the radiated microwave energy which can be still further increased by an increase in the capacitance of the capacitors (13).

(Figure 1)